## B302

## Isolation and Characterization of 4-Chlorophenoxyacetic Acid (4-CPA)-Degrading Bacteria from Soils

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Several dominant 4-chlorophenoxyacetic acid (4-CPA)-degrading bacteria were isolated from countrywide soils. The isolates were identified by 16S rRNA gene sequencing and produced distinct REP-PCR patterns. The 4-CPA degradative enzymes were shown to be inducible by 4-CPA. These strains were generally restricted in their substrate utilization abilities and none of them could degrade 2,4-D, although 2,4-D esterase activities were present in cells grown on 4-CPA. Plasmid DNAs were not detected from most of the isolates and their 4-CPA degradation phenotypes were not transferable to other strains, suggesting that the 4-CPA degradative genes were in the chromosome. The 4-CPA degradation patterns in axenic cultures and natural soils varied depending on the strains and the addition of 4-CPA degraders much improved the 4-CPA degradation in persistent soils.

## B303

## The Effect of Environmental Factors on the Lytic Activity of *Moraxella* sp. against *Anabaena cylindrica*

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The authors studied the effect of environmental factors on the lytic activity of *Moraxella* sp. against *Anabaena cylindrica* (Cyanobacterium). And the results were follows;

1. The bacterium, *Moraxella* sp., lysed *A. cylindrica* up to pH 9 but didn't above pH 10.
2. The addition of glucose to the culture media showed negative effect on the lytic activity and sodium nitrate as a nitrogen source for microbes exhibited a little positive effect.
3. Reciprocal mixed culture up to 200 rpm also showed lytic activity.
4. Extracellular medium of *Moraxella* sp. contained lytic activity against *A. cylindrica*.
5. The lytic activity was stable against temperature.

Referring to the above facts, it is suggested that *Moraxella* sp. actively produce and release hydrolase(s) which lyse cyanobacterial cell wall.